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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,781	12/29/2003	Frederick A. Jelley	60130-1734;02MRA364,368	6425

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EXAMINER

BURCH, MELODY M

ART UNIT	PAPER NUMBER
3683	

DATE MAILED: 11/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/747,781	<b>Applicant(s)</b> JELLEY ET AL.	
	<b>Examiner</b> Melody M. Burch	<b>Art Unit</b> 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 7,9-11 and 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,8,12-15,17-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the brake pad being pivotally mounted relative to the support as first recited in line 3 of claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Examiner notes that the drawings show a brake pad being slidably arranged with respect to the support but not pivotally mounted relative to the support.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 4-6, 8, 12, 13, 14, 15, 17, 18, and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1 and 14 now include the limitation of the brake pad being pivotally mounted relative to the support. Examiner notes that the support is pivotally mounted relative to the rotating member but that the brake pad 14 taken as a whole is arranged slidably relative to the support. Therefore, the originally filed disclosure lacks support for the added limitation. The remaining claims are rejected due to their dependency from one of claims 1 and 14.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-6, 8, 12, 13, 14, 15, 17, 18, 19, 20, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5775782 to Akita et al. in view of US Patent 6112861 to Tomoe and DE-19850678 (DE'678).

Re: claims 1-4, 12, 13, 14, 15, 19, and 22. Akita et al. shows in figure 2 a self-energizing brake assembly comprising a support 44 mounted at an angle relative to a rotatable brake member 30 and a brake pad 34,40 mounted relative to the support and movable along the support between engaged and disengaged positions with the rotatable brake member to generate a braking force between the brake pad and the rotatable brake member, wherein the support is variable for controlling a self-energizing gain in the braking force.

Akita et al. lack the limitation of the support being pivotally mounted so that the angle of the support is variable.

Tomoe teaches in figure 17 a brake disk apparatus including a pivotally mounted support 3B wherein the angle at which the support is mounted with respect to the rotatable member 2 can be varied.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the mounting of the support of Akita et al. to have included a pivotally mounted support, as taught by Tomoe, in order to provide a mechanical means of adjusting the gain of the self-energizing braking force without having to be concerned about lack of gain adjustment due to loss of hydraulic fluid.

Akita et al., as modified, lack the limitation of the brake pad being pivotally mounted to the support. (As best understood, Examiner has interpreted the language to

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mean that the friction lining of the brake pad is pivotally mounted to the wedge or base portion of the brake pad causing a portion of the brake pad to be pivotally mounted relative to the support.)

DE'678 teaches in figure 2 the use of a brake pad 6,11,12 being pivotally mounted to a support 16.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the arrangement of the brake pad with respect to the support of Akita et al., as modified, to have included the brake pad to have been pivotally mounted to the support, as taught by DE'678, in order to provide a means for compensating for brake disk surface irregularities.

Re: claims 5, 6, 17, 20, and 21. Akita et al., as modified, is silent as to the adjustable member being compliant.

DE'678 teaches in figure 2 the use of a compliant adjustable member 7 that biases the support 16 toward the member to be braked 8.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the brake device of Akita et al., as modified, to have included a compliant adjustable member, as taught by DE'678, in order to provide a fail-safe braking mechanism for safety purposes.

Re: claim 18. See element 50 in figure 2 of Akita et al.

Re: claim 8. Akita et al., as modified, describe a way of adjusting the self energizing gain by axially with respect to the rotating member, but lack the specific limitation of the adjustment occurring by way of a decrease of the angle of the support.

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Tomoe teaches the use of an actuator 20 which decreases the angle of the support as a way of controlling the axial distance of the support from the rotating member.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Akita et al., as modified, to have included an actuator to decrease the angle in order to adjust the gain depending on the particular braking application similar to the way in which the gain is adjusted by the axial movement of the support in figures 1 and 2 of Akita. The modified way provides a functionally equivalent alternate way of adjusting the self-energizing gain.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection. Applicant's amendments to claims 1, 14, and 19 prompted to grounds of rejection. Upon further review, Examiner has determined that claims 2 and 3 may be reasonably rejected as set forth above.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent 3869024 to Hauth et al. teach the use of a self-energizing brake device having a brake pad slidable along a support 53 that is pivotally mounted at 54.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan can be reached on 571-272-6786. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mmb  
November 15, 2006

*Melody M. Burch*  
**Melody M. Burch**  
**Primary Examiner**  
**Art Unit 3683**

11/16/06